

FUEL INJECTION SYSTEM

Abstract

The fuel injection system according to the invention comprises a nozzle (2) with an inlet and a needle (15). A control piston (16) forms a control chamber (17) and abuts the needle such that a higher pressure in the control chamber urges the piston to close the nozzle. A cam-driven plunger (5) forms a plunger chamber (7) connected to the inlet of the nozzle. The system also comprises a common rail (11) for fuel, a feed line (13) and an electrically operated valve (9). The valve isolates the chamber from the common rail and connects it to the line while in a third position, isolates it from both the line and the common rail in a second position, and isolates it from the line and connects it to the common rail in a first position. There are also means (12) for pressurizing the feed line with a relatively low fuel feed pressure and a fuel tank (20). The control chamber is connected to the common rail.